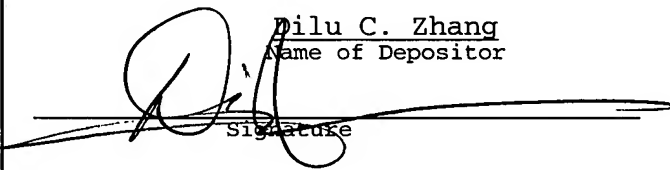


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Wang et al.

Title: VIDEO ENCODING WITH MOTION-SELECTIVE WAVELET
TRANSFORM

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|---|
| EXPRESS MAIL mailing label number: <u>EV 102067127 US</u> Date of Deposit: <u>10/17/03</u> |
| I hereby certify that this correspondence is being deposited with the United States Postal Service as EXPRESS MAIL in an envelope addressed to: The Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, on: |
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* * *

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Pursuant to 37 C.F.R. §1.56(a), Applicant hereby cites the following documents (copies enclosed) listed on the attached copy of Form PTO-1449.

This Information Disclosure Statement is filed in accordance with the paragraph of 37 CFR §1.97 checked below:

X 1.97(b) This Information Disclosure Statement is filed:

- (1) Within three months of the filing date of a national application; OR
- (2) Within three months of the date of entry of the national stage of an international application; OR
- (3) Before the mailing of a first Office Action on the merits.

No fee or certification is required.

 1.97(c) This Information Disclosure Statement is filed after the period specified in paragraph (b) above, but before the mailing date of either:

- (1) A Final Action under 37 CFR 1.113; OR
- (2) A Notice of Allowance under 37 CFR 1.311;

AND is accompanied by either:
(check one)

_____ the Certification under 37 CFR
1.97(e) as set out below; OR

_____ the fee of \$240.00 under 37 CFR
1.17(p) .

___ 1.97(d) This Information Disclosure Statement is filed
after the mailing date of either:

(1) a Final action under 37 CFR 1.113; OR

(2) A Notice of Allowance under 37 CFR 1.311;

BUT before payment of the Issue Fee, AND is accompanied
by:

(1) the Certification under 37 CFR 1.97(e) as
set out below; AND

(2) Petition is hereby made under 37 CFR
1.97(d) for consideration of this
Information Disclosure Statement; AND,

(3) Authorization to charge the petition fee
of \$130.00 as set out in 37 CFR 1.17(i) .

If this Information Disclosure Statement is being filed
under 37 CFR 1.97(c) or 1.97(d), the undersigned Attorney hereby

certifies that:

— each item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing date of this Statement;

or

— no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, or to the knowledge of the undersigned Attorney after making reasonable enquiry, was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing date of this Statement.

MERL-1501

Authorization is hereby given to charge the indicated fee(s)
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Please charge any additional fee due for this paper to
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Respectfully submitted,

MITSUBISHI ELECTRIC RESEARCH LABORATORIES

By: 

Andrew J. Curtin

Reg. No. 48,485

Attorney for Assignee

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Cambridge, Massachusetts 02139
(617) 621-7539

Customer No. 022199

Enclosures

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Form PTO-1449
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Patent and Trademark OfficeAttorney Docket Number:
MERL-1501

Serial Number:

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

Applicant:
Wang et al.Filing date:
Herewith

Group art area:

U.S. PATENT DOCUMENTS

| Exam- iner Initial | Patent number | Date | Name | Class | Subclass | Filing date if appropriate |
|--------------------------|---------------|------|------|-------|----------|-------------------------------|
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FOREIGN PATENT DOCUMENTS

| | Document number | Date | Country | Class | Subclass | Translation | |
|--|-----------------|------|---------|-------|----------|-------------|----|
| | | | | | | YES | NO |
| | | | | | | | |

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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|--|--|------------------|--|
| 1. | Antonini, et al. in "Image coding using the wavelet transform," IEEE Trans. Image Processing," April 1992 | | |
| 2. | Le Gall et al., in "Subband coding of digital images using symmetric short kernel filters and arithmetic coding techniques," Proc. IEEE Int'l Conf. Acoustics, Speech and Signal Processing, 1988. | | |
| 3. | Kim et al., in "Low Bit-Rate Scalable Video Coding with 3D Set Partitioning in Hierarchical Trees (3D SPIHT)," IEEE Trans. Circuits and Systems for Video Technology, December 2000. | | |
| 4. | Hsiang, et al., in "Embedded video coding using invertible motion compensated 3D subband/wavelet filter bank," Proc. Packet Video Workshop, Sardinia, Italy, May 2000. | | |
| 5. | Kingsbury, "Complex wavelets for shift invariant analysis and filtering of signals," Journal of Applied and Computational Harmonic Analysis, May 2001. | | |
| 6. | Kingsbury et al. in "Redundant Representation with Complex Wavelets: How to achieve sparsity?," Proc. IEEE Int'l Conference on Image Processing, 2003. | | |
| 7. | Selesnick, "The Design of Approximate Hilbert Transform Pairs of Wavelet Bases," IEEE Transactions on Signal Processing, Vol. 50, No. 5, May 2002 | | |
| 8. | Selesnick et al., "Video Denoising Using 2D and 3D Dual-Tree Complex Wavelet Transforms," Polytechnic University, Brooklyn, NY. | | |
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